

I CLAIM:

1. A suspension system for a vehicle having a main frame, a handlebar and a front wheel, the suspension system comprising:
a linkage connecting the front wheel with respect to the handlebar for moving the handlebar relative to the main frame responsive to movement of the front wheel relative to the main frame.
2. The suspension system of claim 1 wherein the linkage is reversibly operable to provide that upward movement of the front wheel relative to the main frame causes a related displacement of the handlebar relative to the main frame.
3. The suspension system of claim 2 wherein the related displacement of the handlebar is dampened relative to the upward movement of the front wheel.
4. The suspension system of claim 1 wherein the linkage comprises:
a four bar link moveably supporting the handlebar relative to the main frame.
5. The suspension system of claim 1 wherein the linkage comprises:
a double ended link for moveably supporting the handlebar relative to the main frame.
6. The suspension system of claim 1 wherein the linkage comprises:
at least one fork slider connecting the front wheel with respect to the main frame; and
a connector link connecting the at least one fork slider with respect to the handlebar.
7. The suspension system of claim 1 wherein the linkage comprises:
one or more cylinders connected with respect to the front wheel and the handle bar;
a working fluid contained in the one or more cylinders transferring movement of the front wheel to movement of the handlebar.
8. The suspension system of claim 1 further comprising:
a right handlebar moveably attached to the main frame;
a left handlebar moveably attached to the main frame, the right handlebar and the left handlebar each independently moveable relative to the main frame.
9. The suspension system of claim 1 further comprising:
a displacement sensor connected with respect to the linkage for determining a displacement of the front wheel;
an actuator connected with respect to the linkage to control a position of the handlebar based on input from the displacement sensor.

09697870-00001

10. The suspension system of claim 9 wherein at least one of the actuator and the displacement sensor are adjustable to provide adjustable movement of the handlebar relative to the main frame responsive to movement of the front wheel relative to the main frame.

11. A suspension system for a vehicle having a main frame, a handlebar, a fork and a front wheel, the suspension system comprising:

at least one fork slider positioned within the fork and moveably connecting the front wheel with respect to the main frame;

a four bar link moveably supporting the handlebar relative to the main frame;

a connector link connecting the at least one fork slider with respect to the four bar link for moving the handlebar relative to the main frame responsive to movement of the front wheel relative to the main frame.

12. The suspension system of claim 11 further wherein the connector link is configured to dampen movement of the handlebar relative to movement of the front wheel.

13. The suspension system of claim 11 wherein the four bar link comprises a parallelogram link having two pivoting connections with respect to a stem of the main frame and two opposite pivoting connections with respect to the handlebar.

14. The suspension system of claim 11 wherein the connector link is pivotally connected to the at least one fork slider.

15. The suspension system of claim 11 wherein the connector link includes at least one intermediate link pivotally connecting the connector link with respect to the four bar link.

16. The suspension system of claim 11 wherein the connector link is pivotally connected with respect to the fork.

17. A suspension system for a vehicle having a main frame, a handlebar and a fork, the suspension system comprising:

at least one fork slider slideably positioned within the fork;

a four bar link moveably supporting the handlebar relative to the main frame;

a connector link connecting one of the fork and the at least one fork slider with respect to the four bar link for moving the handlebar relative to the main frame responsive to movement of one of the fork and the at least one fork slider relative to the main frame.

18. The suspension system of claim 17 wherein one of the fork and the at least one fork slider is arranged to receive one of a ski, a wheel and a float.

19. The suspension system of claim 17 wherein the connector link is pivotally connected to the fork.

20. The suspension system of claim 17 wherein handlebar moves downwardly in a vertical direction a corresponding amount as the fork slider moves within the fork.

1705080-03001 092750-022650